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SUPPLEMENTAL INFORMATION
DISCLOSURE
STATEMENT BY APPLICANT

Application Number 10/734499

Filing Date December 12, 2003

First Named Inventor Raanan A. Miller

Art Unit 2881

Examiner Name Hashmi, Zia R.

(Use as many sheets as necessary)

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Sheet 1 of 1 Attorney Docket Number SION-P12-041

			U.S. PA	TENT DOCUMENTS	
Examiner	C:4-	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	Cite No. ¹	Number-Kind Code ² (if known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
V.	AΑ	2003/0052263 A1	03/20/03	Kaufman et al.	
• [AB	2003/0132380 A1	07/17/03	Miller et al.	
T	AC	6,639,212	10/28/03	Guevremont	
	AD	6,653,627	11/25/03	Guevremont	
	AE	6,690,004	02/10/04	Miller et al.	
T	AF	6,703,609	03/09/04	Guevremont	
	AG	6,713,758	03/30/04	Guevremont	
T	AH	2004/0094704 A1	05/20/04	Miller et al.	
	Αl	6,753,522	06/22/04	Guevremont	
\mathcal{T}	AJ	6,770,875	08/03/04	Guevremont	
T = I	AK	6,774,360	08/10/04	Guevremont	
I	AL	6,787,765	09/07/04	Guevremont	
L	АМ	6,799,355	10/05/04	Guevremont	
I	AN	6,806,466 B2	10/19/04	Guevremont	

	FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ -Number Hind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
Was	BA	WO-01/69217 A2	09/20/01	National Research Council Canada				
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	NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²			
MC	CA	"Comparison of the Planar and Coaxial Field Asymmetrical Waveform Ion Mobility Spectrometer (FAIMS)," International Journal of Mass Spectrometry, 225, (2003), pp. 39-51.				

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

^{&#}x27;Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature ZiA R- HASHHI	Date Considered	6/28/05
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	Complete if Known				
Application Number		10/734499			
	Filing Date	December 12, 2003			
	First Named Inventor	Raanan A. Miller			
	Art Unit	2881			
	Examiner Name	Hashmi, Zia R.			
_	Attorney Docket Number	SION-P12-041			

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
West	AA	US-2,615,135	10-21-1952	Glenn		
	AB	US-2,818,507		Britten		
	AC	US-2,919,348		Bierman		
	AD	US-3,511,986	05-12-1970			
	AE	US-3,621,240		Cohen et al.		
	AF	US-3,648,046	03-07-1972	Denison et al.		
	AG	US-3,931,589		Aisenberg et al.		
	AH	US-4,019,989		Hazewindus et al.		
	Al	US-4,025,818		Giguere et al.		
	AJ	US-4,136,280	01-23-1979			
	AK	US-4,163,151		Bayless et al.		
\neg	AL	US-4,201,921	05-06-1980			
$\neg \vdash$	AM	US-4,315,153	02-09-1982	Vahrenkamp		
	AN	US-4,517,462	05-14-1985			
	AO	US-4,761,545		Marshall et al.		
	AP	US-4,885,500		Hansen et al.		
	AQ	US-5,298,745		Keman et al.		
	AR	US-5,420,424		Carnahan et al.	·	
	AS	US-5,455,417	10-03-1995			
\neg	AT	US-5,536,939		Freidhoff et al.		
	AU	US-5,644,131	07-01-1997	Hansen		
\dashv	AV	US-5,654,544	08-05-1997	Dresch		
	AW	US-5,723,861	03-03-1998	Camahan et al.		
	AX	US-5,763,876		Pertinarides et al.		
	AY	US-5,789,745		Martin et al.		
	AZ	US-5,801,379	09-01-1998			
\top		US-5,811,059	09-22-1998			
\top		US-5,834,771	11-10-1998			
_		US-5,838,003	11-17-1998			
		US-5,852,302	12-22-1998			
	AE1	US-5,965,882	10-12-1999	Megerle et al.	1	
	AF1	US-6,049,052	04-11-2000	Chutjian et al.		
	AG1	US-6,066,848	05-23-2000	Kassel et al.		
7		US-6,107,628	08-22-2000	Smith et al.		
	Al1	US-6,124,592	09-26-2000	Spangler		
	AJ1	US-6,157,029	12-05-2000	Chutjian et al.		
T	AK1	US-6,157,031	12-05-2000			
	AL1	US-6,188,067 B1	02-13-2001	Chutjian et al.		
I		US-6,200,539 B1	03-13-2001	Sherman et al.		
I_{-}^{-}		US-6,262,416 B1	07-17-2001	Chutjian et al.		
		US-6,281,494 B1	08-28-2001	Chutjian et al.		
L^{-}		US-6,495,823 B1	12-17-2002			
J	AQ1	US-6,504,149 B2	01-07-2003	Guevremont et al.		

[Signature] Considered Signature	Examiner Signature ZiA	R- HASHMI	Date Considered	6/28/05
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0000				Application Number	10/734499	
IN	FORMATION	ON DI	SCLOSURE	Filing Date	December 12, 2003	
STATEMENT BY APPLICANT			APPLICANT	First Named Inventor	Raanan A. Miller	
OTATEMENT DITAL FEOTILITY				Art Unit	2881	
	(Use as many sheets as necessary)			Examiner Name	Hashmi, Zia R.	
Sheet	2	of	4	Attorney Docket Number	SION-P12-041	

Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
W	AR1	US-2001/0030285 A1	10-18-2001	Miller et al.	
	AS1	US-2002/0134932 A1	09-26-2002	Guevremont et al.	
	AT1	US-2002/0070338 A1	06-13-2002	Lododa	
	AU1	US-2003/0089847 A1	05-15-2003	Guevremont et al.	
	AV1	US-2003/0020012 A1		Guevremont	
$\overline{7}$	AW1	US-2003/0038235 A1	02-27-2003	Guevremont et al.	
7	AX1	US-6,323,482 B1	11-27-2001	Clemmer et al.	
	AY1	US-6,512,224	01-28-2003	Miller et al.	
7	AZ1	US-6,621,077	09-16-2003	Guevremont et al.	

			FOREI	GN PATENT	DOCUMENTS		
Examin Initials*	er	Cite No.1	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁴ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
kd	7	ВА	WO-00/08454	02-17-2000	National Research Council Canada		
	T	88	WO-00/08455	02-17-2000	National Research Council Canada		
	T	вс	WO-00/08456	02-17-2000	National Research Council Canada		
		BD	WO-00/08457	02-17-2000	National Research Council Canada		
\Box		BE	SU-966583 A	10-15-1982	Gorshkov		
		BF	SU-1337934 A2	09-15-1987	Buryakov		
$\neg \tau$		BG	SU-1412447 A1		Buryakov et al.		Ш
		ВН	SU-1485808 A1	06-10-1998	Buryakov et al.		<u> </u>
\Box		ВІ	SU-1627984 A2	02-15-1991			$oxed{oxed}$
П		BJ	WO-01/08197 A1	02-01-2001	The Charles Stark Draper Laboratory		
		вк	WO-01/22049 A2	03-29-2001	Haley et al.		
П	-	BL	WO-01/35441 A1	05-17-2001	The Charles Stark Draper Laboratory		
П		ВМ	WO-96/19822 A1	06-27-1996	Laboratory		
		BN	WO-01/69220 A2	09-20-2001	National Research Council Canada		
		во	WO-01/69647 A2	09-20-2001	National Research Council Canada		
		BP	WO-02/071053 A2	09-12-2002	The Charles Stark Draper Laboratory		
		BQ	WO-02/083276	10-24-2002	The Charles Stark Draper Laboratory, Inc.		
I_{-}		BR	WO-03/005016	01-16-2003			
I		BS	WO-2003/015120	02-20-2003	Sionex Corporation		

Examiner Signature	Zin	R-HASHMI	Date Considered	6/28/05
Signature	, , , ,	1001110	Considered	

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INFORMATION DISCLOSURE			SCLOSURE	Filing Date	December 12, 2003
STATEMENT BY APPLICANT (Use as many sheets as necessary)		First Named Inventor	Raanan A. Miller		
		Art Unit	2881		
		Examiner Name	Hashmi, Zia R.		
Sheet	3	of	4	Attorney Docket Number	SION-P12-041

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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
W	CA	"A Micromachined Field Driven Radio Frequency-Ion Mobility Spectrometer for Trace Level Chemical Detection," A Draper Laboratory Proposal Against the "Advanced Cross-Enterprise Technology Development for NASA Missions," Solicitation, NASA NRA 99-OSS-05.	1
	СВ	BARNETT et al., "Isotope Separation Using High-Field Asymmetric Waveform Ion Mobility Spectrometry," Nuclear Instruments & Methods in Physics Research, Vol. 450, No. 1, pp. 179-185 (2000).	
	CC	BURYAKOV et al., "A New Method of Separation of Multi-Atomic Ions by Mobility at Atmospheric Pressure Using a High-Frequency Amplitude-Asymmetric Strong Electric Field," International Journal of Mass Spectrometry and Ion Processes, Vol. 128, pp. 143-148 (1993).	ļ
	CD	BURYAKOV et al., "Drift Spectrometer for the Control of Amine Traces in the Atmosphere," J. Anal. Chem., Vol. 48, No. 1, pp. 112-121 (1993).	
	CE	BURYAKOV et al., "Separation of lons According to Mobility in a Strong AC Electric Field," Letters to Journal of Technical Physics, Vol. 17, pp. 11-12 (1991).	
	CF	BURYAKOV et al., "Device and Method for Gas Electrophoresis, Chemical Analysis of Environment," ed. Prof. V.V. Malakhov, Novosibirsk: Nauka, pp. 113-127 (1991).	
	CG	CARNAHAN et al., "Field Ion Spectrometry - A New Analytical Technology for Trace Gas Analysis," ISA, Vol. 51, No. 1, pp. 87-96 (1996).	
	СН	CARNAHAN et al., "Field Ion Spectrometry - A New Technology for Cocaine and Heroin Detection," SPIE, Vol. 2937, pp. 106-119 (1997).	
	CI	EICEMAN et al., "Miniature radio-frequency mobility analyzer as a gas chromatogrphic detector for oxygen-containing volatile organic compounds, pheromones and other insect attractants," Journal of Chromatography, Vol. 917, pp. 205-217 (2001)	
	CJ	GUEVREMONT et al., "Atmospheric Pressure Ion Focusing in a High-Field Asymmetric Waveform Ion Mobility Spectrometer," Review of Scientific Instruments, Vol. 70, No. 2, pp. 1370-1383 (1999).	
	СК	GUEVREMONT et al., "Calculation of Ion Mobilities from Electrospray Ionization High-Field Asymmetric Waveform Ion Mobility Spectrometry Mass Spectrometry," Journal of Chemical Physics, Vol. 114, No. 23, pp. 10270-10277 (2001).	
	CL	GUEVREMONT et al., "High Field Asymmetric Waveform Ion Mobility Spectrometry-Mass Spectrometry: An Investigation of Leucine Enkephalin Ions Produced by Electrospray Ionization," J. Am. Soc. Mass. Spectrom., Vol. 10, pp. 492-501 (1999).	
	СМ	HANDY et al., "Determination of Nanomolar Levels of Perchlorate in Water by ESI-FAIMS-MS," J. Anal. At. Spectrometry, Vol. 15, pp. 907-911 (2000).	
	CN	KRYLOV, "A Method of Reducing Diffusion Losses in a Drift Spectrometer," Technical Physics, Vol. 4d, No. 1, pp. 113-116 (1999).	
	со	KRYLOV, "Pulses of Special Shapes Formed on a Capacitive Load," Instruments and Experimental Techniques, Vol. 40, No. 5, (1997). Also cited in Database Nauka/Interperiodika 'Online!, International Academic Publishing Company (IAPC), Russia, E. Krylov.	

Examiner	Tin P. Harlly	Date	1/2015
Signature	ZIA K. HASHMI	Considered	6/28/05

PTO/SB/08a/b (08-03)
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300	Suitable for form 14407001	Application Number 10/734499			10/734499
١N	IFORMATIO	N DIS	SCLOSURE	Filing Date	December 12, 2003
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Examiner Initials	Cite No.1	magazine, journal, senal, symposium, catalog, etc.), date, page(s), volume-issue intribut(s), publisher, city and/or country where published.	T²
M	СР	MILLER et al., "A MEMS Radio-Frequency Ion Mobility Spectrometer for Chemical Agent Detection," Proceedings of the 2000 SolidState Sensors and Actuators Workshop (Hilton Head, SC, June 2000)	
	CQ	MILLER et al., "A MEMS radio-frequency ion mobility spectrometer for chemical vapor detection," Sensors and Actuators, Vol. 91, pp. 301-312 (2001)	
	CR	MILLER et al., "A Novel Micromachined High-Field Asymmetric Waveform-Ion Mobility Spectrometer," Sensors and Actuators B, Vol. B67, No. 3, pp. 300-306 (2000).	
7	cs	PILZECKER et al., "On-Site Investigations of Gas Insulated Substations Using Ion Mobility Spectrometry for Remote Sensing of SF6 Decomposition," IEEE, pp. 400-403 (2000).	
7	СТ	RIEGNER et al., "Qualitative Evaluation of Field Ion Spectrometry for Chemical Warfare Agent Detection," Proceedings of the ASMS Conference on Mass Spectrometry and Allied Topics, pp. 473A-473B (1997).	
1	CU	SCHNEIDER et al., "High Sensitivity GC-FIS for Simultaneous Detection of Chemical Warfare Agents," Journal of Process Analytical Chemistry, Vol. 5, Nos. 3, 4, pp. 124-136 (2000)	

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